

IN THE CLAIMS

Please amend the claims as follows. This listing replaces all prior versions.

1. (currently amended) A microarray of oligonucleotides, said microarray comprising a plurality of HLA Class I oligonucleotide probes on a solid support, wherein said plurality of probes comprises ~~being sufficient to represent~~ at least 80% of ~~known~~ polymorphisms in the HLA Class I locus.

2. (currently amended) A microarray in accordance with claim 1, wherein said plurality of probes comprises ~~is sufficient to represent~~ at least 90% of ~~known~~ polymorphisms in the HLA Class I locus.

3. (currently amended) A microarray in accordance with claim 1, wherein said plurality of probes comprises ~~is sufficient to represent~~ at least 98% of ~~known~~ polymorphisms in the HLA Class I locus.

4. (currently amended) A microarray in accordance with claim 1, wherein ~~each of said plurality of HLA Class I oligonucleotide probes~~ are ~~[[is]]~~ covalently attached to said solid support and have ~~has~~ from 17 to 23 nucleotides.

5. (currently amended) A microarray in accordance with claim 4, wherein ~~each of said plurality of HLA Class I oligonucleotide probes~~ have ~~has~~ 20 nucleotides. ~~nucleic acids~~.

6. (currently amended) A microarray in accordance with claim 1 [[4]], wherein said HLA Class I oligonucleotide probes are ~~probe is~~ selected from the group consisting of HLA-A oligonucleotide probes, HLA-B oligonucleotide probes and HLA-C oligonucleotide probes.

7. (currently amended) A microarray in accordance with claim 1 [[6]], wherein said HLA Class I oligonucleotide probes are ~~probe is~~ selected from the group consisting of HLA-A exon 2 and exon 3 oligonucleotide probes, HLA-B exon 2 and exon 3 oligonucleotide probes and HLA-

C exon 2 and exon 3 oligonucleotide probes.

8. (currently amended) A microarray in accordance with claim 1[[6]], wherein said HLA Class I oligonucleotide probes are ~~probe is~~ selected from the group consisting of HLA-B exon 2 and exon 3 oligonucleotide probes.

9. (original) A microarray in accordance with claim 4, wherein said solid support is a glass slide.

10. (currently amended) A microarray in accordance with claim 4, wherein said ~~plurality of HLA Class I oligonucleotide~~ probes are present on said solid support at a surface density of from about 250 to about 450 angstrom²/molecule.

11. (currently amended) A microarray in accordance with claim 4, wherein said ~~plurality of HLA Class I oligonucleotide~~ probes are present on said solid support at a surface density of from about 325 to about 375 angstrom²/molecule.

12. (withdrawn) A method of preparing an array of covalently-attached oligonucleotide probes, said method comprising;

(a) contacting a solid support with an aminoalkyltrialkoxysilane in the vapor phase at reduced pressure to form an aminoalkylsilane-derivatized solid support; and

(b) contacting said aminoalkylsilane-derivatized solid support with a linking group to covalently attach said linking group to said aminoalkylsilane-derivatized solid support to form a linking-group modified solid support; and

(c) attaching a plurality of oligonucleotide probes to said linking group modified solid support to form said array of covalently-attached oligonucleotide probes.

13. (withdrawn) A method in accordance with claim 12, wherein said contacting of step (a) is carried out at reduced pressure and with heating.

14. (withdrawn) A method in accordance with claim 12, wherein said aminoalkyltrialkoxysilane is aminopropyltrimethoxysilane.

15. (withdrawn) A method in accordance with claim 12, wherein said linking group is 1,4-phenylenediisothiocyanate.

16. (withdrawn) A method in accordance with claim 12, wherein said plurality of oligonucleotide probes is a plurality of HLA Class I oligonucleotide probes.

17. (withdrawn; currently amended) A method in accordance with claim 12, wherein said plurality of oligonucleotide probes is a plurality of HLA-B oligonucleotide probes and comprises ~~is sufficient to represent all known~~ at least 80% of polymorphisms in exons 2 and 3 of the HLA-B locus.

18. (withdrawn) A method of HLA Class I tissue typing, said method comprising:

(a) amplifying exons 2 and 3 from a genomic sample of tissue using labeled primers and an asymmetric PCR method to form a labeled, single-stranded DNA sample;

(b) contacting said labeled, single-stranded DNA sample with a microarray prepared according to claim 12 under hybridization conditions; and

(c) detecting a hybridization pattern for said DNA sample and assigning an HLA Class I allele type by analysis of said hybridization pattern.

19. (withdrawn) A method of HLA tissue typing, said method comprising:

(a) selectively amplifying the HLA regions in a genomic sample using asymmetric PCR and labeled primers to form a labeled, single-stranded DNA sample;

(b) contacting labeled, single-stranded DNA sample with a microarray prepared according to claim 12 under hybridization conditions; and

(c) detecting a hybridization pattern for said DNA sample and assigning an HLA allele type by analysis of said hybridization pattern.

20. (canceled)

21. (new) The microarray of claim 6, wherein said HLA-A oligonucleotide probes comprise at least 86 polymorphisms.

22. (new) The microarray of claim 6, wherein said HLA-B oligonucleotide probes comprise at least 185 polymorphisms.

23. (new) The microarray of claim 6, wherein said HLA-C oligonucleotide probes comprise at least 45 polymorphisms.

24. (new) The microarray of claim 7, wherein said HLA-B exon 2 oligonucleotide probes comprise at least 68 polymorphisms, and wherein said HLA-B exon 3 oligonucleotide probes comprise at least 70 polymorphisms.

25. (new) An array of oligonucleotides on a solid support, wherein said oligonucleotides comprise locus polymorphisms of the HLA Class I region, and wherein said oligonucleotides have from 17 to 23 nucleotides.

26. (new) The array of claim 25, wherein said locus polymorphisms are HLA-A locus polymorphisms or HLA-C locus polymorphisms.

27. (new) The array of claim 25, wherein said locus polymorphisms are HLA-B locus polymorphisms.

28. (new) The array of claim 25, wherein said locus polymorphisms are selected from the group consisting of: HLA-B locus exon 2 polymorphisms and HLA-B locus exon 3 polymorphisms.

29. (new) The array of claim 26, wherein said HLA-A locus polymorphisms comprise at least 86 HLA-A locus polymorphisms.

30. (new) The array of claim 26, wherein said HLA-C locus polymorphisms comprise at least 45 locus polymorphisms.

31. (new) The array of claim 27, wherein said HLA-B locus polymorphisms comprise at least 185 HLA-B locus polymorphisms.

32. (new) The array of claim 28, wherein said HLA-B exon 2 locus polymorphisms comprise at least 68 HLA-B locus exon 2 polymorphisms, and wherein said HLA-B locus exon 3 polymorphisms comprise at least 70 HLA-B locus exon 3 polymorphisms.

33. (new) The array of claim 25, wherein said oligonucleotides have 20 nucleotides.

34. (new) The array of claim 25, wherein said solid support comprises glass.

35. (new) The array of claim 25, wherein said oligonucleotides further comprise a linking group, and wherein said linking group is a 15-mer.

36. (new) The array of claim 35, wherein said 15-mer is a 15-mer of poly-dT.

37. (new) The array of claim 35, wherein said oligonucleotides are covalently bound to said solid support.

38. (new) An array of oligonucleotides on a solid support, said array comprising a plurality of oligonucleotides, said plurality consisting essentially of oligonucleotides comprising locus polymorphisms of the HLA Class I region, and wherein said oligonucleotides have from 17 to 23 nucleotides.

39. (new) The array of claim 38, wherein said locus polymorphisms are HLA-A locus polymorphisms or HLA-C locus polymorphisms.

40. (new) The array of claim 38, wherein said locus polymorphisms are HLA-B locus polymorphisms.

41. (new) The array of claim 30, wherein said locus polymorphisms are selected from the group consisting of: HLA-B locus exon 2 polymorphisms and HLA-B locus exon 3 polymorphisms.

42. (new) The array of claim 39, wherein said HLA-A locus polymorphisms comprise at least 86 HLA-A locus polymorphisms.

43. (new) The array of claim 39, wherein said HLA-C locus polymorphisms comprise at least 45 HLA-C locus polymorphisms.

44. (new) The microarray of claim 40, wherein said HLA-B locus polymorphisms comprise at least 185 HLA-B locus polymorphisms.

45. (new) The microarray of claim 41, wherein said HLA-B locus exon 2 or HLA-B locus exon 3 polymorphisms comprise at least 68 HLA-B locus exon 2 polymorphisms or at least 70 HLA-B locus exon 3 polymorphisms.

46. (new) The array of claim 38, wherein said oligonucleotides have 20 nucleotides.

47. (new) The array of claim 38, wherein said solid support comprises glass.

48. (new) The array of claim 38, wherein said oligonucleotides further comprise a linking group, and wherein said linking group is a 15-mer.

49. (new) The array of claim 48, wherein said 15-mer is a 15-mer of poly-dT.

50. (new) The array of claim 48, wherein said oligonucleotides are covalently bound to said solid support.